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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,122	11/19/2001	Ilan Bloom	P-4007-US	8188

7590

06/27/2003

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EXAMINER

BOOTH, RICHARD A

ART UNIT

PAPER NUMBER

2812

DATE MAILED: 06/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,122

Applicant

BLOOM ET AL.

Examiner

Richard A. Booth

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 3-8 and 16-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 9-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eitan et al., U.S. Patent 4,758,869 in view of Mitchell et al., U.S. Patent 5,120,672 and further in view of Wang, U.S. Patent 4,992,391.

Eitan shows the invention substantially as claimed including forming a non-volatile memory device and forming a protective layer 12 over at least a portion of said non-volatile memory structure, said protective layer adapted to persist on at least a portion of the non-volatile memory structure and to absorb electromagnetic energy

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having a wavelength shorter than visible light (see fig. 2 and col. 3-line 5 to col. 5-line 38).

Eitan fails to expressly disclose the non-volatile memory comprising a polycide structure formed over a non-conducting charge trapping layer, and an additional layer over said protective layer.

Mitchell et al. discloses forming a charge trapping layer of an ONO composite (see fig. 2 and abstract). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Wang shows as to include a non-conducting charge trapping layer as suggested by Mitchell et al. because the use of ONO floating gate electrodes is a well known suitable alternative to the use of conducting charge trapping layers. Furthermore, Wang discloses a non-volatile memory including a polycide structure (18,20) and an additional layer 24 over the non-volatile memory (see figs. 2-4 and col. 3-line 30 to col. 4-line 49). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Eitan so as to include a polycide structure because this provides improved conductivity for the memory structure compared with a polysilicon structure.

Concerning the particular material used for the additional layer, official notice is taken that the use of both doped and undoped layers are well known in the art as overlying passivation layers, for instance, in providing moisture protection to underlying devices and would have been obvious to include as the additional layer in the Wang

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reference to be modified with Eitan and Mitchell. Since such official notice was taken in the previous office action, this limitation is taken to be admitted prior art.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eitan et al., U.S. Patent 4,758,869 in view of Mitchell et al., U.S. Patent 5,120,672 and further in view of Wang, U.S. Patent 4,992,391 as applied to claims 1-2 and 12-15 above, and further in view of Kimura et al., U.S. Patent 6,195,196.

Eitan et al., Mitchell et al., and Wang are applied as above but fail to expressly disclose the protection layer being highly resistive polysilicon.

Kimura et al. discloses using polysilicon as an ultraviolet absorber (see col. 18-lines 60-66). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Eitan et al. modified by Mitchell et al. and Wang so as to form the protective layer of polysilicon because Kimura et al. teaches this is an effective material to absorb ultraviolet radiation.

Concerning the particular resistivity of the undoped polysilicon layer, it would have been obvious to determine through routine experimentation the optimum resistivity based upon a variety of factors and would not lend patentability to the instant application absent the showing of unexpected results.

Response to Arguments

Applicant's arguments with respect to claims 1-2 and 9-15 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A. Booth whose telephone number is 308-3446. The examiner can normally be reached on Monday-Thursday from 7:30-6:00.

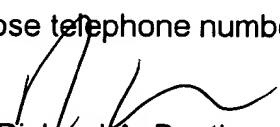
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on 308-3325. The fax phone numbers for the organization where this application or proceeding is assigned are 308-7724 for regular communications and 308-7724 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1782.



Richard A. Booth
Primary Examiner
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June 24, 2003